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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,419	08/31/2001	Keito Kondoh	62807-011	7823

7590

05/04/2006

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EXAMINER
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AGGARWAL, YOGESH K

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/943,419

Applicant(s)

KONDOH ET AL.

Examiner

Yogesh K. Aggarwal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 3-6 and 17 are have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (US Patent # 5,511,155), Takemoto et al. (US Patent # 5,172,236) and in further view of Tamura et al. (US Patent # 6,980,251).

[Claim 1]

Yamaguchi teaches an image pick up means (figure 2, camera 20) for generating a plurality of screens ( $I_A$  to  $I_z$ ) having different exposure conditions (figures 5 and 6 show different exposure conditions), each of the generated screens having a different focal voltage (It would be inherent that each screen will have different focal voltage because they have different focal distances as shown in the figure 2 corresponding to minimum, maximum and medium focal distances), wherein the plurality of screens are adjacent temporally (Since the images are taken at the same time) and are synthesized to form a synthesized image (col. 3 lines 25-56).

Yamaguchi fails to disclose means for detecting the focal voltage of each of said plurality of screens and storing said detected focal voltage of each respective screen, said focal voltage

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containing high-frequency components included in each of said plurality of screens; and focal voltage selecting means for selectively outputting the focal voltage of one of the plurality of screens that is most suited to obtain a desired focus based on a predetermined selection criterion; wherein automatic focusing is carried out according to said focal voltage outputted from said focal voltage selecting means.

However Takemoto et al. teaches detecting the focal voltage of each of the plurality of screens and storing the detected focal voltage of each respective screen, the focal voltage containing high-frequency components included in each of said plurality of screens (col. 3 lines 1-20) and focal voltage selecting means for selectively outputting the focal voltage of one of the plurality of screens that is most suited to obtain a desired focus based on a predetermined selection criterion (col. 3 lines 20-33, figures 1-5). It is noted that after the plural optical images are received in an image pick up operation 11, the circuit diagram shown in figure 1 requires no manual input. Therefore an automatic focusing is carried out according to the focal voltage outputted from the voltage selecting means.

Therefore taking the combined teachings of Yamaguchi and Takemoto it would be obvious to one skilled in the art at the time of the invention to have been motivated to have a means for detecting the focal voltage of each of said plurality of screens and storing said detected focal voltage of each respective screen and focal voltage selecting means for selectively outputting the focal voltage of one of the plurality of screens that is most suited to obtain a desired focus based on a predetermined selection criterion; wherein automatic focusing is carried out according to said focal voltage outputted from said focal voltage selecting means in order to have a focus adjustment that is carried out automatically and more accurately.

Yamaguchi and Takemoto fail to teach wherein the exposure conditions sets a value for each of a diaphragm aperture, light quantity storage time and an amplifier gain. However Tamura et al. teaches that a change in exposure due to a change in the subject is detected from the video signal by means of the AE detector circuit 12, and, on the basis of the output signal from the AE detector circuit 12, the exposure control circuit 13 selects exposure control parameters for the diaphragm mechanism 2, the electronic shutter which controls the storage time of the image sensing device 3 and the gain of the AGC circuit 8 and decides the amount of correction to be applied to each of these parameters in order to have a control that is carried out so as to obtain stable, optimum exposure at all times.

Therefore taking the combined teachings of Yamaguchi, Takemoto and Tamura, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have wherein the exposure conditions sets a value for each of a diaphragm aperture, light quantity storage time and an amplifier gain in order to have a control that is carried out so as to obtain stable, optimum exposure at all times.

[Claim 4]

Takemoto teaches that the arithmetic portion 13 is adapted, when the data of the plural images are stored in the storage portion, to mutually compare in magnitude the high-frequency component data of the regions which take the same position in the respective images and thereby to make a composite image from the plural images by selecting one of the regions having a largest high-frequency component data in magnitude at every position (col. 3 lines 22-33).

[Claim 3]

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Yamaguchi, Takemoto and Tamura fail to disclose wherein during said automatic focusing, the selecting means continuously provides a focal voltage that is outputted at the time that said lens group is initially driven, for a period from said lens group are initially driven until a desired focus is reached, to thereby stop moving said lens group.

However Official Notice is taken of the fact that during said automatic focusing, the selecting means continuously provides a focal voltage that is outputted at the time that said lens group is initially driven, for a period from said lens group are initially driven until a desired focus is reached, to thereby stop moving said lens group in order to obtain accurate focusing for a particular portion of the image.

Therefore taking the combined teachings of Yamaguchi, Takemoto, Tamura and Official Notice, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have a focal voltage that is outputted at the time that said lens group is initially driven, for a period from said lens group are initially driven until a desired focus is reached, to thereby stop moving said lens group in order to obtain accurate focusing for a particular portion of the image.

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (US Patent # 5,511,155), Takemoto et al. (US Patent # 5,172,236), Tamura et al. (US Patent # 6,980,251) and in further view of Kondo et al. (US Patent # 5,093,716).

[Claim 5]

Yamaguchi, Takemoto and Tamura fail to disclose wherein said focal voltage selecting means selectively outputs a focal voltage for focusing on the basis of a comparison among luminance

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level frequency distributions belonging to said screens respectively associated with said stored focal voltages inputted to said focal voltage selecting means.

However Kondo teaches that a discrete area is established by an auto-focus area setting circuit 24 which establishes the focus detection area in which intermediate and higher frequency components of the luminance signal are examined (col. 7 lines 2-14). Kondo also teaches that the luminance separator 32 converts the sampling frequency at which the digitized luminance components are produced (col. 9 lines 7-39).

Therefore taking the combined teachings of Yamaguchi, Takemoto, Tamura and Kondo, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have a focal voltage for focusing on the basis of a comparison among luminance level frequency distributions belonging to said screens respectively associated with said stored focal voltages inputted to said focal voltage selecting means in order to simplify the accuracy of the automatic focusing.

[Claim 6]

Claim 6 recites what was discussed with respect to claims 4 and 5.

5. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (US Patent # 5,511,155), Takemoto et al. (US Patent # 5,172,236), Tamura et al. (US Patent # 6,980,251) and in further view of Hirasawa (US Patent # 5,946,504).

[Claim 17]

Yamaguchi teaches generating focal voltage of each of the plurality of screens obtained under different exposure conditions as recited in claims 1, but the combination of references fails to teach the focal voltage selecting means is configured to perform a step to compare the focal

voltage of each of the plurality of different screens, and update the focal voltage that is most suited to obtain the desired focus based on a result of the comparing step; and the lens group drive means adjusts the focal point of said lens group based on the updated focal voltage that is most suited to obtain the desired focus.

However Hirasawa et al. teaches an automatic auto-focusing signal processing circuit 25 that has a microcomputer 16 stores a focus voltage in a memory, so that the newly input focus voltage is compared with a preceding focus voltage also stored in the memory (col. 8 lines 22-32, figure 1). Hirasawa further teaches that this updated voltage is used in making the determination of a driving speed of the focusing lens so as to bring the focusing lens to stop at the in-focus position.

Therefore taking the combined teachings of Yamaguchi, Takemoto, Tamura and Hirasawa, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have used the focal voltage selecting means is configured to perform a step to compare the focal voltage of each of the plurality of different screens, and update the focal voltage that is most suited to obtain the desired focus based on a result of the comparing step; and the lens group drive means adjusts the focal point of said lens group based on the updated focal voltage that is most suited to obtain the desired focus in order to provide an automatic focus adjusting device capable, despite the type or characteristics of the lens, of accurately controlling automatic focus adjustment, thus providing a high versatility.



***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K. Aggarwal whose telephone number is (571) 272-7360. The examiner can normally be reached on M-F 9:00AM-5:30PM.

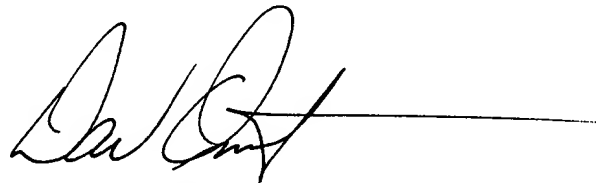
7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)-272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YKA

April 21, 2006

A handwritten signature in black ink, appearing to read 'David Ometz', followed by a long horizontal line extending to the right.

DAVID OMETZ  
SUPERVISORY PATENT EXAMINER